



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

Am

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/003,958	11/15/2001	Michael Baentsch	CH920000029	6674

7590 05/04/2005

Casey August
Intellectual Property Law Dept.
IBM Corporation
P.O. Box 218
Yorktown Heights, NY 10598

EXAMINER

YIGDALL, MICHAEL J

ART UNIT PAPER NUMBER

2192

DATE MAILED: 05/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/003,958

Applicant(s)

BAENTSCH ET AL.

Examiner

Michael J. Yigdall

Art Unit

2192

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 November 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 November 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Applicant's amendment and response filed on November 26, 2004 has been fully considered. Claims 1-16 are pending.

Response to Arguments

2. Applicant's arguments have been fully considered but they are not persuasive.

Applicant contends that the Schwabe reference does not disclose a converter for mapping Java symbolic linking strings in a Java program onto linking identifiers (Applicant's remarks, page 9, middle paragraph).

However, Schwabe discloses a converter for generating an export file that includes symbolic names for program elements and corresponding token values (see, for example, page 8, lines 17-20). Specifically, the export file maps the program elements to the tokens (see, for example, page 8, lines 25-27). Therefore, Schwabe discloses a converter for mapping the symbolic names of program elements to tokens.

The tokens correspond to link information (see, for example, page 8, lines 12-15), and the program elements are externally accessible program elements that may be referenced or imported (see, for example, page 8, lines 20-23). In other words, the tokens are linking identifiers and the symbolic names of the program elements are symbolic linking strings for externally accessible program elements. Schwabe discloses that the program elements are in a Java program (see, for example, page 8, lines 23-25). Therefore, the converter disclosed by Schwabe is for mapping symbolic linking strings of Java program elements to linking identifiers.

Furthermore, Schwabe expressly discloses, "Just as the export file maps from a package's externally visible names to tokens, there is a set of link information for each package on the card that maps from tokens to resolved references," (page 10, lines 17-19). The act of resolving references corresponds to linking (see, for example, page 10, line 21).

Therefore, as presented above, Schwabe discloses a converter for mapping Java symbolic linking strings in a Java program onto linking identifiers.

Moreover, although Applicant particularly notes that the mapping is done "onto linking identifiers" (Applicant's remarks, page 8, second paragraph), the cited sections of Applicant's specification show that these linking identifiers are indeed "tokens" (Applicant's remarks, pages 8-9), such as taught by Schwabe.

Oath/Declaration

3. The new oath or declaration filed on November 26, 2004 is noted and the objection to the oath or declaration is withdrawn.

Drawings

4. The objection to the drawings is withdrawn in view of the replacement sheet for FIG. 1 filed on November 26, 2004.

Specification

5. The objection to the disclosure is withdrawn in view of the amendments to the specification filed on November 26, 2004.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

7. Claims 1, 5, 8, 12 and 16 are rejected under 35 U.S.C. 102(a) as being anticipated by International Pub. No. WO 00/46667 to Schwabe et al. (art of record, “Schwabe”).

With respect to claim 1 (original), Schwabe discloses a Java run-time system (see, for example, page 1, lines 27-29, which shows a Java virtual machine or run-time system) comprising:

(a) a stacked-based interpreter for executing a Java program comprising Java bytecode instructions and Java class structures (see, for example, page 6, lines 18-20, which shows an interpreter for executing Java programs, and page 1, lines 19-26, which shows that the programs comprise Java bytecode instructions and class structures);

(b) a converter for mapping standard Java symbolic linking strings contained in a downloaded Java program onto linking identifiers (see, for example, page 8, lines 17-27, which shows a converter for mapping symbolic names or strings to tokens or identifiers); and

(c) an export table for storing linking identifiers generated by the converter to bind a reference in a bytecode instruction to be executed to a corresponding link target (see, for example, page 8, lines 12-15, which shows an export component or table for storing the tokens or identifiers and linking or binding a reference).

With respect to claim 5 (original), Schwabe further discloses said run-time system being ported on an embedded microcontroller of a smart card (see, for example, page 2, lines 7-17, which shows porting the run-time system on an embedded processor or microcontroller of a smart card).

With respect to claim 8 (original), the limitations recited in the claim are analogous to those of claim 1 (see the rejection of claim 1 above).

With respect to claim 12 (original), the limitations recited in the claim are analogous to those of claim 1 (see the rejection of claim 1 above).

With respect to claim 16 (original), the limitations recited in the claim are analogous to those of claim 5 (see the rejection of claim 5 above).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 2-4, 6, 7, 9-11, 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schwabe, as applied to claims 1, 8 and 12 above, respectively, in view of U.S. Pat. No. 5,764,987 to Eidt et al. (art of record, "Eidt").

With respect to claim 2 (original), although Schwabe discloses that the converter uses a function to assign the tokens or identifiers (see, for example, page 14, line 27 to page 15, line 7) to which the symbolic names or strings are mapped (see, for example, page 8, lines 17-27), Schwabe does not expressly disclose the limitation wherein the converter is adapted to use a hash function to map the standard Java symbolic linking strings onto linking identifiers.

However, Eidt discloses symbol import and export tables for linking references to objects in memory at run-time (see, for example, column 2, lines 1-34), wherein a hash function is used to locate the export symbols (see, for example, column 12, lines 5-27). Hashing the export symbols considerably increases the speed of searching for and importing the symbols (see, for example, column 11, lines 49-55).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to supplement the converter of Schwabe with a hash function, such as taught by Eidt, so as to increase the speed of mapping the symbolic names or strings to the tokens or identifiers.

With respect to claim 3 (original), Schwabe in view of Eidt further discloses the limitation wherein the converter is adapted to use a parameterized hash function to map the standard Java symbolic linking strings onto linking identifiers, the parameter being contained in the Java program to be downloaded (see, for example, Eidt, column 13, lines 13-35, which shows that the hash function is parameterized with parameters contained in the program).

With respect to claim 4 (original), Schwabe in view of Eidt further disclose a Java development kit comprising the Java run-time system (see, for example, Schwabe, page 7, lines 3-7, which shows Java software development kits) and a Java conversion system for calculating

a parameter for standard Java symbolic linking strings of a Java program to be downloaded on the Java run-time system (see, for example, Schwabe, page 10, lines 15-21, which shows a conversion system for determining parameters of the linking information of a Java program to be downloaded).

With respect to claim 6 (original), the limitations recited in the claim are analogous to those of claim 5 (see the rejection of claim 5 above).

With respect to claim 7 (original), the limitations recited in the claim are analogous to those of claim 5 (see the rejection of claim 5 above).

With respect to claim 9 (original), the limitations recited in the claim are analogous to those of claim 2 (see the rejection of claim 2 above).

With respect to claim 10 (original), the limitations recited in the claim are analogous to those of claim 3 (see the rejection of claim 3 above).

With respect to claim 11 (original), Schwabe in view of Eidt does not expressly disclose the limitation wherein the parameter for the Java program to be downloaded is used to ensure that the hash function does not map two symbolic linking strings of the Java program to the same linking identifier.

However, Schwabe further discloses assigning tokens or identifiers in such a way as to ensure that two symbolic names or strings are not mapped to the same identifier (see, for example, page 14, line 27 to page 15, line 7).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a parameter to ensure that the hash function does not map two symbolic linking strings of the Java program to the same linking identifier, as taught by Schwabe, for the purpose of avoiding any penalty that could otherwise result from a hash collision (see, for example, Eidt, column 12, line 66 to column 13, line 2).

With respect to claim 13 (original), the limitations recited in the claim are analogous to those of claim 2 (see the rejection of claim 2 above).

With respect to claim 14 (original), the limitations recited in the claim are analogous to those of claim 3 (see the rejection of claim 3 above).

With respect to claim 15 (original), the limitations recited in the claim are analogous to those of claim 11 (see the rejection of claim 11 above).

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Yigdall whose telephone number is (571) 272-3707.

The examiner can normally be reached on Monday through Friday from 7:30am to 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Q. Dam can be reached on (571) 272-3695. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MY

Michael J. Yigdall
Examiner
Art Unit 2192

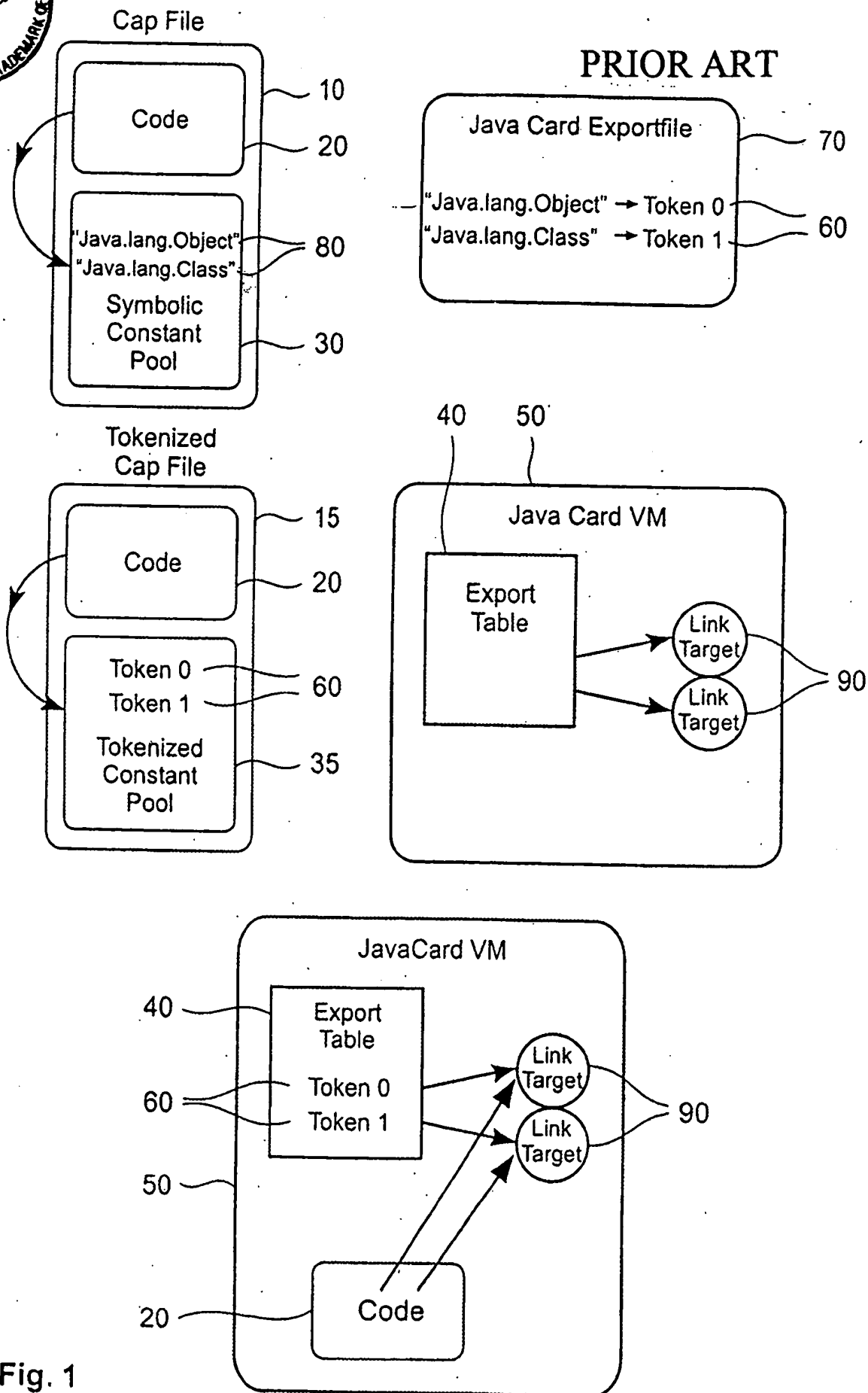
mjy



ANTONY NGUYEN-BA
PRIMARY EXAMINER



BEST AVAILABLE COPY



accepted MY 4/20/05